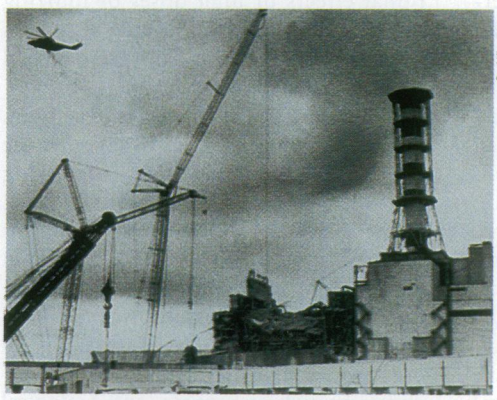
Since 1992, SREL scientists have made numerous expeditions to Ukraine to study the genetic effects of radiation on the flora and fauna within the Chornobyl Exclusion Zone, which extends 30 km from the plant in all directions. Chesser himself has made some 15 expeditions to Chornobyl. The idea for the laboratory was first raised in the summer of 1993. "During my work [at Chornobyl] that summer and since," says Chesser, "I found that many of the samples were too high in radioactivity to transport, and that several important analyses and experimental designs could not be performed because of lack of nearby equipment and [the short-term nature of the] expeditions."

Talks with the Ukrainian government ensued, and in 1996, the Savannah River Operations Office decided to provide further equipment to aid the research efforts at Chornobyl. Since then, through the efforts of the DOE Office of Nonproliferation and National Security, political and logistical arrangements were made that culminated in the agreement signed by U.S. Vice President Al Gore and Ukrainian President Leonid Kuchma.

Chesser will serve as director of science programs for the laboratory, and will sit on its governing board. The lab will also employ a director, lab technicians, and field crews. The full-time staff will be Ukrainian, but scientists, professors, and students from other countries are expected to visit. The lab should be at least initially operational by the end of summer 1999. As with all other DOE contracts, the new lab will be reviewed after five years to determine whether it will continue as is, continue with modifications, or be eliminated.



Paul Khramtsov

A new chapter for Chornobyl. A new international laboratory may help answer questions about long-term environmental effects from the nuclear disaster.

In addition to laboratory space, the new facility will also contain offices and lodging for visitors. The Ukrainian government will provide updated, renovated buildings and utilities for the project, while the DOE will pay for the lab's equipment and operating costs.

Says Chesser, "We're trying to make this a truly interdisciplinary effort." Already, institutions such as Texas Tech University (Lubbock), the Illinois State Museum (Springfield), Oklahoma State University (Stillwater), and Texas A&M University (College Station) have research programs in place that are expected to eventually lend complementary expertise to the lab's research efforts.

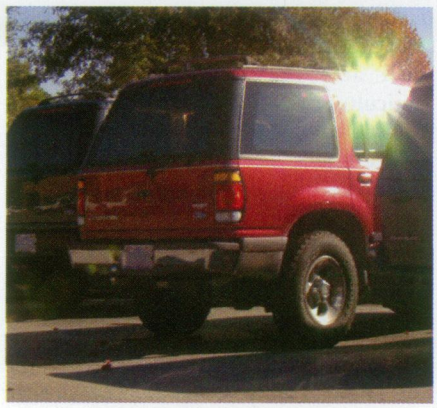
Is It Safe to Drive SUVs?

The California Air Resources Board (CARB), often a bellwether of national regulatory trends, voted on November 5 to apply passenger car tailpipe emission standards to light trucks. The proposal to cut pollution from pickups, sport utility vehicles (SUVs), and minivans by the year 2007 is part of a broader effort to bring Southern California's air into compliance with the Clean Air Act.

The issue of light truck emissions is gaining importance because sales of such vehicles currently account for about 45% of total new vehicle sales. Between 1970 and 1995, the total miles driven by passenger cars grew 168%, while the mileage driven by two-axle, four-wheel trucks exploded by 558%, according to the American Automobile Manufacturers Association report *AAMA Motor Vehicle Facts and Figures, 1997*. Although light trucks, particularly SUVs and minivans, are increasingly used as passenger vehicles, they can create far more pollution than cars.

Federal pollution and fuel efficiency regulations are significantly looser for light trucks (with loaded vehicle weights above 3,750 pounds) than passenger cars. In California, light trucks with loaded vehicle weights between 3,750 and 5,750 pounds can emit 33% more nonmethane hydrocarbons (an ozone precursor) than passenger cars, 100% more nitrogen oxides (NO_x), and 30% more carbon monoxide (CO). EPA figures show that motor vehicles overall account for 35% of NO_x, 64% of the national output of CO, and 27% of volatile organic compounds.

The auto industry opposes further regulation, saying trucks pollute more than cars because they're heavier and designed for hauling. "The higher standard is a reflection of the fact that they do more work," says Sam Leonard, director of mobile emissions and fuel economy at General Motors. "The controls we have are virtually identical to what's on passenger cars. It's not that we've scrimped on cost or hardware or engineering to make them as clean as possible."



Not so sporting. Sport utility vehicles are popular with drivers, but not with air regulators who plan to tighten emission standards on SUVs.

Leonard also says most of the benefits of tightening emissions standards have already been realized. Today's cars and trucks, he says, are 97–99% cleaner than models sold during the 1960s, and each further increment of cleanup will incur ever greater cost.

Environmentalists see matters differently. Roland Hwang, a transportation analyst with the Union of Concerned Scientists, says the 97% claim is "exaggerated, and not relevant to whether cars are still a problem." Hwang says in the real world cars and trucks pollute much more than under laboratory conditions due to aggressive driving, poor maintenance, and the fact that pollution measurements are made with air conditioners shut off. Hwang also says the share of smog-forming pollutants (hydrocarbons and NO_x) attributable to light trucks more than doubled between 1965 and 1995, making them a target ripe for control.

And while auto manufacturers complain they'll have trouble meeting the tighter standards, California's air regulators assert that they have conducted tests in which they changed the nature and location of the catalytic converter on a heavy SUV and "met the standard we're proposing," says Richard Varenchik, an information officer for the CARB.

As often happens, California's light truck rule foreruns a national effort to regulate the environmental effects of the increasingly popular vehicles. A draft of the EPA's Tier II auto pollution regulations is due in December 1998, with a regulation due one year later. How the regulation will treat light trucks is still uncertain.

Both the EPA and CARB are focused on emissions, not fuel efficiency, where

light trucks again enjoy a significant regulatory advantage. While the Corporate Average Fuel Economy (CAFE) system requires each manufacturer's fleet of cars to average 27.5 miles per gallon, light trucks must average only 20.7 miles per gallon. Yet with the rising popularity of the heaviest SUVs, all three U.S. automakers failed to meet that standard for the 1997 model year. (Because several years' averages can be lumped together, one year's average does not violate the Clean Air Act.)

To Leonard, that difficulty is a good indication of the futility of tighter mileage requirements. "Judging by the difficulty that we and other domestic manufacturers of full lines of trucks and SUVs have had in meeting CAFE, there's very little ability to improve at a reasonable price," he says. But environmentalists argue that 6,000-pound vehicles with V-8 engines are not necessary to haul groceries from the supermarket. "All the improvements [in fuel economy] are getting eaten by increases in performance [such as more horsepower, bigger engines, and faster driving speeds] and rising vehicle weight," says Martin Thomas of the American Council for an Energy Efficient Economy in Washington, DC. "If we held performance constant, there could be improvements in fuel economy."

SUVs also have an outsized appetite for other raw materials. The auto industry already consumes 27% of aluminum, 35% of iron, and 14.5% of steel used in the United States. As increasing sales of ever larger trucks boost the average vehicle size, rising materials consumption will raise the environmental toll of mining, processing, and discarding or recycling these materials.

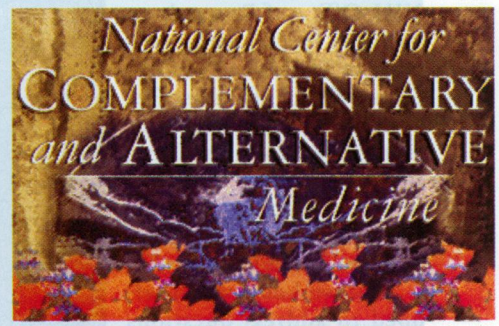
The issue of size also plays a role in safety. SUVs and light pickups are not only more massive than cars, they also have high, stiff frames that override the protective component of cars. When one car strikes another, 6 people die in the struck vehicle for every 1 in the striking vehicle, according to Julie Rochman, communications director of the Insurance Institute for Highway Safety, an industry group in Arlington, Virginia. But when SUVs strike cars, the ratio is 27 to 1.

That doesn't mean that SUVs are any safer than cars, however. Rochman points out that since SUVs have high centers of gravity, they roll over easily. Indeed, the institute recently analyzed car and truck accidents and, Rochman says, found that "in each weight class, if a crash takes place, your chances of survival are better in a car."

ehp net Supplemental Information

Taking herbs is one of the oldest and most enduring ways of treating human maladies. By one World Health Organization estimate, nearly 80% of the world's population, some 4 billion people, use herbal medicine for some aspect of their primary health care. The U.S. Congress acted in 1994 to reduce FDA control over herbs and other dietary supplements, making them more accessible to a thriving market in this country.

Though no longer evaluating the safety of new herbal supplements before they reach the market, the FDA continues to warn consumers of dangers that may be associated with taking them. An important part of this effort, and a valuable resource for anyone using dietary supplements, is the FDA Center for Food Safety and Applied Nutrition's (CFSAN) dietary supplements Web site at http://vm.cfsan.fda.gov/~dms/supplmnt.html. Here, the FDA warns consumers about the possible risks involved in taking herbal supplements with names like Sleeping Buddha, Herbal Fen-Phen, and Chomper.



In some cases, risk information is based on the testimony of consumers and doctors who have noticed disturbing side effects from using an herbal product. The CFSAN Web site allows users to alert the FDA in such cases and also to find out if anyone else has reported problems with a particular supplement. Both can be done easily by following the Special Nutritionals Adverse Event Monitoring System link on the CFSAN dietary supplement page. For example, entering the term *Hypericum perforatum* (St. John's wort) will return two reports of adverse side effects observed in people using this popular herb.

For researchers who want to investigate the health benefits and risks of taking herbal supplements such as St. John's wort, another informative resource is the Web site of the NIH National Center for Complementary and Alternative Medicine (NCCAM), located at http://altmed.od.nih.gov/nccam/. This office collects and organizes a tremendous amount of information and research on a broad range of alternative treatments, from herbs and acupuncture to prayer and diet (click first on What Is CAM? and then on Classification of Alternative Medicine Practices to view the whole list).

The Information Resources link on the NCCAM home page routes users to references such as the CAM Citation Index, a searchable database of over 90,000 alternative medicine citations from the National Library of Medicine. The citations can also be browsed by disease, treatment method, and symptom by following the Browse link on the CAM Citation Index page. Most herbal supplement citations can be found by following the CAM Methods link to the Phytomedicine page. Information about the NCCAM's programs and publications can also be accessed by following the NCCAM Clearinghouse link from the Information Resources page.

Besides organizing information, the NCCAM also sponsors research on alternative treatments. The Research Grants link connects users to information on what projects the NCCAM has funded in the past, while the Research Funding Opportunities link connects to the types of investigations that the NCCAM plans to support in the future. For example, by following the Request for Proposals link, users can see that the NCCAM would like to coordinate a multicenter clinical study of the efficacy of St. John's wort in fighting depression. Information about submitting grant applications to the NCCAM is available via the Grant Preparation link, and information about student, postdoctoral, and clinical training opportunities at the NCCAM is available under the Research Training link. Through the CFSAN site and the NCCAM site, medical professionals, researchers, and consumers can accesss important information on a growing variety of herbal products.